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SEQUENCE LISTING

<110> Kodama, Tatsuhiko Yamada, Yoshiki Kamada, Nobuo Jishage, Kou-ichi

<120> Nonhuman animals for antibody production, and methods and systems for producing antibodies using such animals

<150> PCT/JP2005/006298 <151> 2005-03-31 <150> JP2004-107669 <151> 2004-03-31 <160> 10

<130> 14875-167US1

<170> PatentIn version 3.1

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48

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					ggc Gly											432
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Gly	Asn	Pro 195	Ile	Asn	gtg Val	Thr	Val 200	Asp	Thr	Val	Leu	His 205	Arg	Asp	Gly	624
Val	Ser 210	Met	Ile	Leu	aaa Lys	Gln 215	Lys	Ser	Thr	Phe	Thr 220	Thr	Arg	Gln	Ile	672
Lys 225	Ala	Ala	Cys	Leu	ctc Leu 230	Ile	Lys	Asp	Āsp	Lys 235	Asn	Asn	Pro	Glu	Ser 240	720
Val	Thr	Arg	Glu	His 245	tgt Cys	Leu	Ile	Asp	Asn 250	Asp	Ile	Tyr	Āsp	Leu 255	Ser	768
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Glu	His	Arg 275	Val	Lys	aag Lys	Arg	Pro 280	Pro	Thr	Trp	Arg	His 285	Asn	Val	Arg	864
Ala	Lys 290	Tyr	Thr	Glu	gga Gly	Asp 295	Thr	Ala	Thr	Lys	Gly 300	Asp	Leu	Met	His	912
					atg Met 310											960

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	aac Asn															1104
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Ile Gln Glu Glu Leu Met Tyr Glu Asn Asp Leu Leu Lys Met Asn Ile 305 Glu Leu Met His Ala His Ile Asn Lys Leu Asn Asn Met Leu His Asp 325 330 Leu Ile Val Ser Val Ala Lys Val Asp Glu Arg Leu Ile Gly Asn Leu Met Asn Asn Ser Val Ser Ser Thr Phe Leu Ser Asp Asp Thr Phe Leu Leu Met Pro Cys Thr Asn Pro Pro Ala His Thr Ser Asn Cys Tyr Asn 375 370 Asn Ser Ile Tyr Lys Glu Gly Arg Trp Val Ala Asn Thr Asp Ser Ser 390 Gln Cys Ile Asp Phe Ser Asn Tyr Lys Glu Leu Ala Ile Asp Asp Asp 405 410 415 Val Glu Phe Trp Ile Pro Thr Ile Gly Asn Thr Thr Tyr His Asp Ser 425 Trp Lys Asp Ala Ser Gly Trp Ser Phe Ile Ala Gln Gln Lys Ser Asn 440 Leu Ile Thr Thr Met Glu Asn Thr Lys Phe Gly Gly Val Gly Thr Ser 450 Leu Ser Asp Ile Thr Ser Met Ala Glu Gly Glu Leu Ala Ala Lys Leu 465 470 Thr Ser Phe Met Phe Gly His Val Val Asn Phe Val Ile Ile Leu Ile 485 Val Ile Leu Phe Leu Tyr Cys Met Ile Arg Asn Arg Asn Arg Gln Tyr 500 505 <210> 3 <211> 1464 <212> DNA <213> Baculovirus <220> <221> CDS <222> (1)..(1464) <400> 3

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96

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			aat Asn					480
			tcc Ser					528
			gag Glu					576
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			att Ile					720
	Glu		ttg Leu					768

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Lys Asp Val Glu Ile Thr Ile Val Glu Thr Asp Tyr Asn Glu Asn Val 50 60

Ile Ile Gly Tyr Lys Gly Tyr Tyr Gln Ala Tyr Ala Tyr Asn Gly Gly 65 70 75 80

Ser Leu Asp Pro Asn Thr Arg Val Glu Glu Thr Met Lys Thr Leu Asn 85 90 95

Val Gly Lys Glu Asp Leu Leu Met Trp Ser Ile Arg Gln Gln Cys Glu 100 105 110

Val Gly Glu Leu Ile Asp Arg Trp Gly Ser Asp Ser Asp Cys 115 120 125

Phe Arg Asp Asn Glu Gly Arg Gly Gln Trp Val Lys Gly Lys Glu Leu 130 135 140

Val Lys Arg Gln Asn Asn Asn His Phe Ala His His Thr Cys Asn Lys 145 150 155 160

Ser Trp Arg Cys Gly Ile Ser Thr Ser Lys Met Tyr Ser Arg Leu Glu 165 170 175

Cys Gln Asp Asp Thr Asp Glu Cys Gln Val Tyr Ile Leu Asp Ala Glu 180 \$180\$

Gly Asn Pro Ile Asn Val Thr Val Asp Thr Val Leu His Arg Asp Gly 195 200 205

Val Ser Met Ile Leu Lys Gln Lys Ser Thr Phe Thr Thr Arg Gln Ile 210 215 220

Lys Ala Ala Cys Leu Leu Ile Lys Asp Asp Lys Asn Asn Pro Glu Ser 225 230 235 240

Val Thr Arg Glu His Cys Leu Ile Asp Asn Asp Ile Tyr Asp Leu Ser 245 250 255 Lys Asn Thr Trp Asn Cys Lys Phe Asn Arg Cys Ile Lys Arg Lys Val

Glu His Arg Val Lys Lys Arg Pro Pro Thr Trp Arg His Asn Val Arg 275 280 285

Ala Lys Tyr Thr Glu Gly Asp Thr Ala Thr Lys Gly Asp Leu Met His 290 295 300

Ile Gln Glu Glu Leu Met Tyr Glu Asn Asp Leu Leu Lys Met Asn Ile 305 310 315 320

Glu Leu Met His Ala His Ile Asn Lys Leu Asn Asn Met Leu His Asp 325 330 335

Leu Ile Val Ser Val Ala Lys Val Asp Glu Arg Leu Ile Gly Asn Leu 340 345 350

Met Asn Asn Ser Val Ser Ser Thr Phe Leu Ser Asp Asp Thr Phe Leu 355 360 365

Leu Met Pro Cys Thr Asn Pro Pro Ala His Thr Ser Asn Cys Tyr Asn 370 375 380

Asn Ser Ile Tyr Lys Glu Gly Arg Trp Val Ala Asn Thr Asp Ser Ser 385 390 395 400

Gln Cys Ile Asp Phe Ser Asn Tyr Lys Glu Leu Ala Ile Asp Asp Asp 405 410 415

Val Glu Phe Trp Ile Pro Thr Ile Gly Asn Thr Thr Tyr His Asp Ser $420 \ \ 425 \ \ 430$

Trp Lys Asp Ala Ser Gly Trp Ser Phe Ile Ala Gln Gln Lys Ser Asn 435 440 445

Leu Ile Thr Thr Met Glu Asn Thr Lys Phe Gly Gly Val Gly Thr Ser 450 455 460

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                                     10
                                                         15
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geg geg cat tet gee ttt geg geg gag cac tge aac geg caa atg aag
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           20
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					atc Ile 390											1201
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					acc Thr											1393
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Thr Gly Pro Tyr Lys Ile Lys Asn Leu Asp Ile Thr Pro Pro Lys Glu 35 40 45

Thr Leu Gln Lys Asp Val Glu Ile Thr Ile Val Glu Thr Asp Tyr Asn 50 60

Glu Asn Val Ile Ile Gly Tyr Lys Gly Tyr Tyr Gln Ala Tyr Ala Tyr 65 70 75 80

Asn Gly Gly Ser Leu Asp Pro Asn Thr Arg Val Glu Glu Thr Met Lys 85 90 95

Thr Leu Asn Val Gly Lys Glu Asp Leu Leu Met Trp Ser Ile Arg Gln 100 105 110

Gln Cys Glu Val Gly Glu Glu Leu Ile Asp Arg Trp Gly Ser Asp Ser 115 120 125

Asp Asp Cys Phe Arg Asp Asn Glu Gly Arg Gly Gln Trp Val Lys Gly 130 135 140

Lys Glu Leu Val Lys Arg Gln Asn Asn His Phe Ala His His Thr 145 150 155 160

Cys Asn Lys Ser Trp Arg Cys Gly Ile Ser Thr Ser Lys Met Tyr Ser 165 $$ 170 $$ 175

Arg Leu Glu Cys Gln Asp Asp Thr Asp Glu Cys Gln Val Tyr Ile Leu 180 185 190 Asp Ala Glu Gly Asn Pro Ile Asn Val Thr Val Asp Thr Val Leu His Arg Asp Gly Val Ser Met Ile Leu Lys Gln Lys Ser Thr Phe Thr Thr Arg Gln Ile Lys Ala Ala Cys Leu Leu Ile Lys Asp Asp Lys Asn Asn Pro Glu Ser Val Thr Arg Glu His Cys Leu Ile Asp Asn Asp Ile Tyr Asp Leu Ser Lys Asn Thr Trp Asn Cys Lys Phe Asn Arg Cys Ile Lys Arg Lvs Val Glu His Arg Val Lys Lys Arg Pro Pro Thr Trp Arg His Asn Val Arg Ala Lys Tyr Thr Glu Gly Asp Thr Ala Thr Lys Gly Asp Leu Met His Ile Gln Glu Glu Leu Met Tyr Glu Asn Asp Leu Leu Lys Met Asn Ile Glu Leu Met His Ala His Ile Asn Lys Leu Asn Asn Met Leu His Asp Leu Ile Val Ser Val Ala Lys Val Asp Glu Arg Leu Ile Glv Asn Leu Met Asn Asn Ser Val Ser Ser Thr Phe Leu Ser Asp Asp Thr Phe Leu Leu Met Pro Cys Thr Asn Pro Pro Ala His Thr Ser Asn Cys Tyr Asn Asn Ser Ile Tyr Lys Glu Gly Arg Trp Val Ala Asn Thr Asp Ser Ser Gln Cys Ile Asp Phe Ser Asn Tyr Lys Glu Leu Ala Ile

Asp Asp Val Glu Phe Trp Ile Pro Thr Ile Gly Asn Thr Thr Tyr 420 425 430

His Asp Ser Trp Lys Asp Ala Ser Gly Trp Ser Phe Ile Ala Gln Gln 435 \$440\$

Lys Ser Asn Leu Ile Thr Thr Met Glu Asn Thr Lys Phe Gly Gly Val

Gly Thr Ser Leu Ser Asp Ile Thr Ser Met Ala Glu Glu Glu Leu Ala 465 470 475

Ala Lys Leu Thr Ser Phe Met Phe Gly His Val 485 490